

Source Water Assessment Report



Public Water Supply: MANHATTAN, CITY OF

**Assessment Areas Include:
360**



Kansas Department of Health and Environment
Bureau of Water Watershed Management Section
1000 SW Jackson St., Suite 420
Topeka, KS 66612-1367



Burns & McDonnell
9400 Ward Parkway
Kansas City, MO 64114



Kansas Geological Survey University of Kansas
1930 Constant Ave.
Lawrence, KS 66047

Reports were generated with the Automated Source Water Assessment Tool (ASWAT). Assessments were completed online using ASWAT by hundreds of state employees, public water supply staff, and technical assistant providers throughout the State of Kansas.

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Report Description

Detailed Explanation of Entire Report:

The 1996 amendments to the Safe Drinking Water Act require each state to develop a Source Water Assessment Program (SWAP) and a Source Water Assessment (SWA) for each Public Water Supply (PWS) that treats and distributes raw source water. In Kansas there are 761 public water supplies that require SWAs. A SWA includes a delineation of the source water assessment area, an inventory of potential contaminant sources, and a susceptibility analysis.

A PWS can consist of one or more individual assessment areas that require different assessments. In general, an assessment area is delineated at a two-mile fixed radius for a groundwater well. A surface water intake assessment area is the upstream-drainage area (watershed), inside the state border. Additionally, an assessment area can consist of an individual well, group of wells, an individual surface water intake, or multiple surface water intakes.

After each assessment is completed a report is automatically generated using an Internet-based application called the Automated Source Water Assessment Tool (ASWAT). The individual assessment reports combine to form the entire SWA report for a PWS.

A map of each Assessment Area was also generated with ASWAT. However, for security reasons the maps are not included in this report. To obtain a copy of the map(s), please contact your local PWS.

All PWS reports will be available for viewing and downloading on KDHE's Watershed Management Section website(<http://www.kdhe.state.ks.us/nps>) in 2004.

MANHATTAN, CITY OF Summary:

AA	Type	Diversion Id
360	River Alluvium	012, 011, 008, 010, 020, 021, 022, 013, 018, 014, 015, 017, 016, 019, 24, 23

Public Water Supply: **MANHATTAN, CITY OF**
Assessment Area: **360**
Diversion Id's: **012, 011, 008, 010, 020, 021, 022, 013, 018, 014, 015, 017, 016, 019, 24, 23**
Status: **Accepted**
Submit Date: **2003-02-26 09:32:20**

Executive Summary:

The Executive Summary gives the assessment area's Susceptibility Likelihood Score (SLS) for each contaminant of concern category.

SLS indicates which contaminant category is most likely to impact a given public water supply. Contaminants of concern for groundwater include microbiological, inorganic compounds, nitrates, synthetic organic compounds, pesticides, and volatile organic compounds. Contaminants of concern for surface water include microbiological, inorganic compounds, eutrophication – phosphorus, sedimentation, synthetic organic compounds, pesticides, and volatile organic compounds.

To determine the assessment area's susceptibility to contamination, a qualitative (semi-quantitative) screening level susceptibility analysis was designed that utilizes general assumptions and best professional judgement. It is a systematic procedure comprised of simple yes/no questions. Each question in the susceptibility analysis focuses on the presence or absence of potential pollution sources in the assessment area. SLS is most useful in helping the Public Water Supply (PWS) focus on water quality protection actions towards a contaminant category of concern. For example, if the SLS for microbiological contamination is high, relative to volatile organic compounds (VOC), water supply protection planners would conclude that the attention should be directed towards microbiological contaminant sources rather than VOC sources.

Executive Summary

Public Water Supply: **MANHATTAN, CITY OF**
Assessment Area: **360**

Susceptibility Likelihood Scores for Assessment Area

	A	B	B1	B2	C	C*	D
Susceptibility Likelihood Score – SLS	55	69	67	77	76	58	77
SLS Range	Mid	Mid	Mid	Mid	Mid	Mid	Mid

A – Microbiological

B2 – Sedimentation

C* – Pesticides

B – Inorganic Compounds

C – Synthetic Organic Compounds

D – Volatile Organic Compounds

B1 – Eutrophication – Phosphorous

Susceptibility Likelihood Range

SLS Range	
0–50	Low Susceptibility
51–80	Moderate Susceptibility
81–100	High Susceptibility

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Status: **Accepted**
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Potential Sources:

The Potential Sources section lists all the sites that have been identified as potential sources of contamination.

Potential sources of contamination may include land uses, industry, or businesses that could generate or store chemicals/substances that could potentially contaminate the water supply only if released into the environment. Both unregulated sites from business location databases and regulated sites from various KDHE databases were compiled. Additional sites could have been added by an evaluator through the assessment process to supplement the original data.

The 1987 Standard Industrial Classifications (SIC) were used to identify potential contaminate sites. The SIC system classifies establishments into industries on the basis of the primary activities of the establishment.

Each assessment area is delineated with 3 assessment zones. These zones can be used to get a general understanding of the potential influence sites have based on proximity to the water supply. Zone A is a 100-foot radius around a groundwater well and a 1000-foot radius around a surface water intake. Zone B is a 2000-foot radius around wells and a hydrological delineated buffer around the surface water sources. Zone C is a 2-mile radius around wells and the balance of the watershed for intakes. The potential sources listed in this section are sorted to show all the potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business is identified in the study as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

The data for the potential sources of contamination was compiled from May through August in 2002. Some of the databases used were incomplete datasets that are continually being updated. Due to the incompleteness, inaccuracies, and new development, it is possible that sources of potential contamination that are in the assessment area are not included in the report. Inaccurate locations could also cause sources to show up in the assessment area that are not actually in the assessment. Additionally, duplication between the datasets could cause sites to show up multiple times in the assessment area.

Potential Sources

Public Water Supply: **MANHATTAN, CITY OF**
Assessment Area: **360**

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
140896	General Farm, Primarily Crop	191	B
139398	Dairy Farms	241	B
139448	Veterinary Services, Specialties	742	B
140370	Veterinary Services, Specialties	742	B
141019	Veterinary Services, Specialties	742	B
141020	Veterinary Services, Specialties	742	B
139399	Animal Specialty Services	752	B
139444	Animal Specialty Services	752	B
139730	Animal Specialty Services	752	B
139852	Animal Specialty Services	752	B
141137	Animal Specialty Services	752	B
137958	Single-family Housing Construction	1521	B
138664	Single-family Housing Construction	1521	B
138737	Single-family Housing Construction	1521	B
138959	Single-family Housing Construction	1521	B
139288	Single-family Housing Construction	1521	B
139608	Single-family Housing Construction	1521	B
139609	Single-family Housing Construction	1521	B

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
139622	Single-family Housing Construction	1521	B
139718	Single-family Housing Construction	1521	B
139725	Single-family Housing Construction	1521	B
139864	Single-family Housing Construction	1521	B
139917	Single-family Housing Construction	1521	B
139918	Single-family Housing Construction	1521	B
140485	Single-family Housing Construction	1521	B
140646	Single-family Housing Construction	1521	B
140647	Single-family Housing Construction	1521	B
140848	Single-family Housing Construction	1521	B
140898	Single-family Housing Construction	1521	B
140910	Single-family Housing Construction	1521	B
141046	Single-family Housing Construction	1521	B
141064	Single-family Housing Construction	1521	B
141095	Single-family Housing Construction	1521	B
141176	Single-family Housing Construction	1521	B
142308	Single-family Housing Construction	1521	B
139305	Nonresidential Construction	1542	B
139610	Nonresidential Construction	1542	B
139719	Nonresidential Construction	1542	B
139720	Nonresidential Construction	1542	B
139947	Nonresidential Construction	1542	B
140732	Nonresidential Construction	1542	B

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
141045	Nonresidential Construction	1542	B
141079	Nonresidential Construction	1542	B
141120	Nonresidential Construction	1542	B
141166	Nonresidential Construction	1542	B
137804	Highway and Street Construction	1611	B
137805	Highway and Street Construction	1611	B
137806	Highway and Street Construction	1611	B
137807	Highway and Street Construction	1611	B
137808	Highway and Street Construction	1611	B
139721	Highway and Street Construction	1611	B
138629	Meat Packing Plant Manufacturing	2011	B
140524	Newspapers Publishing and Printing	2711	B
139476	Commercial Printing–Lithographic	2752	B
139936	Commercial Printing–Lithographic	2752	B
139618	Commercial Printing NEC	2759	B
139747	Commercial Printing NEC	2759	B
139883	Commercial Printing NEC	2759	B
140599	Commercial Printing NEC	2759	B
139893	Rubber and plastics hose and belting Manufacturing	3052	B
139953	Metal Doors, Sash, and Trim Manufacturing	3442	B
139628	Plating and Polishing Manufacturing	3471	B

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
137959	Machinery, Except Electrical Manufacturing	3599	B
139919	Machinery, Except Electrical Manufacturing	3599	B
140193	Machinery, Except Electrical Manufacturing	3599	B
141117	Machinery, Except Electrical Manufacturing	3599	B
139850	Aircraft Equipment Manufacturing	3728	B
138630	Boat Building and Repairing Shop Manufacturing	3732	B
139632	Transportation Equipment Manufacturing	3799	B
139438	Signs and Advertising Display Manufacturing	3993	B
139633	Signs and Advertising Display Manufacturing	3993	B
139715	Signs and Advertising Display Manufacturing	3993	B
142337	Signs and Advertising Display Manufacturing	3993	B
139605	Local Trucking, without Storage	4212	B
141049	Local Trucking, without Storage	4212	B

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
140893	Farm Product Warehousing and Storage	4221	B
138675	Refuse Systems	4953	B
139895	Refuse Systems	4953	B
140853	Refuse Systems	4953	B
141050	Refuse Systems	4953	B
140723	Construction and Mining Machinery	5082	B
141080	Construction and Mining Machinery	5082	B
140110	Scrap and Waste Materials	5093	B
139746	Gasoline Service Station	5541	B
139891	Gasoline Service Station	5541	B
140508	Gasoline Service Station	5541	B
140601	Gasoline Service Station	5541	B
141009	Gasoline Service Station	5541	B
137800	Mobile Home Park	6515	B
138566	Mobile Home Park	6515	B
139413	Mobile Home Park	6515	B
141830	Mobile Home Park	6515	B
141831	Mobile Home Park	6515	B
140484	Dry Cleaner	7216	B
140392	Photofinishing Laboratory	7384	B
137962	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	B
137966	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	B

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
139635	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	B
139854	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	B
139856	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	B
140716	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	B
140717	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	B
140771	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	B
141162	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	B
137945	Auto Truck Repair Service	7538	B
137971	Auto Truck Repair Service	7538	B
137972	Auto Truck Repair Service	7538	B
139283	Auto Truck Repair Service	7538	B
139298	Auto Truck Repair Service	7538	B
139717	Auto Truck Repair Service	7538	B
139750	Auto Truck Repair Service	7538	B
139855	Auto Truck Repair Service	7538	B
139863	Auto Truck Repair Service	7538	B

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
139896	Auto Truck Repair Service	7538	B
139898	Auto Truck Repair Service	7538	B
139921	Auto Truck Repair Service	7538	B
139948	Auto Truck Repair Service	7538	B
140169	Auto Truck Repair Service	7538	B
140174	Auto Truck Repair Service	7538	B
140558	Auto Truck Repair Service	7538	B
140565	Auto Truck Repair Service	7538	B
140566	Auto Truck Repair Service	7538	B
140577	Auto Truck Repair Service	7538	B
140615	Auto Truck Repair Service	7538	B
140735	Auto Truck Repair Service	7538	B
140990	Auto Truck Repair Service	7538	B
141839	Auto Truck Repair Service	7538	B
138572	Car Wash	7542	B
139366	Car Wash	7542	B
139723	Car Wash	7542	B
139949	Car Wash	7542	B
139959	Car Wash	7542	B
140609	Car Wash	7542	B
140639	Car Wash	7542	B
141017	Car Wash	7542	B
141840	Car Wash	7542	B

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
137831	Repair Services, Nec	7699	B
139604	Repair Services, Nec	7699	B
140606	Repair Services, Nec	7699	B
138758	Golf Course	7992	B
140967	Golf Course	7992	B
138319	Veterinary Services, Specialties	742	C
139111	Veterinary Services, Specialties	742	C
139779	Veterinary Services, Specialties	742	C
139835	Veterinary Services, Specialties	742	C
140070	Veterinary Services, Specialties	742	C
140775	Veterinary Services, Specialties	742	C
140918	Veterinary Services, Specialties	742	C
141204	Veterinary Services, Specialties	742	C
141205	Veterinary Services, Specialties	742	C
140786	Animal Specialty Services	752	C
140787	Animal Specialty Services	752	C
140919	Animal Specialty Services	752	C
141159	Animal Specialty Services	752	C
140873	Oil and Gas Field services	1389	C
142307	Rock Quarry	1429	C
137774	Single-family Housing Construction	1521	C
138794	Single-family Housing Construction	1521	C
138960	Single-family Housing Construction	1521	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
139143	Single-family Housing Construction	1521	C
139144	Single-family Housing Construction	1521	C
139173	Single-family Housing Construction	1521	C
139599	Single-family Housing Construction	1521	C
139710	Single-family Housing Construction	1521	C
139755	Single-family Housing Construction	1521	C
140142	Single-family Housing Construction	1521	C
140817	Single-family Housing Construction	1521	C
140903	Single-family Housing Construction	1521	C
140904	Single-family Housing Construction	1521	C
141106	Single-family Housing Construction	1521	C
141108	Single-family Housing Construction	1521	C
141770	Single-family Housing Construction	1521	C
141771	Single-family Housing Construction	1521	C
138708	Nonresidential Construction	1542	C
139125	Nonresidential Construction	1542	C
139131	Nonresidential Construction	1542	C
139165	Nonresidential Construction	1542	C
140856	Nonresidential Construction	1542	C
141151	Nonresidential Construction	1542	C
139046	Highway and Street Construction	1611	C
139784	Highway and Street Construction	1611	C
140092	Highway and Street Construction	1611	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
160296	Highway and Street Construction	1611	C
138612	Bottled and Canned Soft Drinks Production	2086	C
141148	Structural Wood members Manufacturing	2439	C
140672	Mobile Home Manufacturing	2451	C
141126	Prefabricated Wood Buildings Manufacturing	2452	C
140201	Newspapers Publishing and Printing	2711	C
142334	Newspapers Publishing and Printing	2711	C
160297	Newspapers Publishing and Printing	2711	C
139649	Commercial Printing–Lithographic	2752	C
140177	Commercial Printing–Lithographic	2752	C
140719	Commercial Printing–Lithographic	2752	C
140741	Commercial Printing–Lithographic	2752	C
139017	Asphalt Paving Mixtures And Blocks Manufacturing	2951	C
138791	Metal Coating and Allied Services Manufacturing	3479	C
138608	Machinery, Except Electrical Manufacturing	3599	C
142338	Signs and Advertising Display Manufacturing	3993	C
142309	Farm Product Warehousing and Storage	4221	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
160298	Farm Product Warehousing and Storage	4221	C
139792	Refuse Systems	4953	C
141128	Refuse Systems	4953	C
141854	Refuse Systems	4953	C
141060	Construction and Mining Machinery	5082	C
140727	Scrap and Waste Materials	5093	C
138249	Gasoline Service Station	5541	C
139677	Gasoline Service Station	5541	C
139701	Gasoline Service Station	5541	C
139706	Gasoline Service Station	5541	C
139771	Gasoline Service Station	5541	C
140081	Gasoline Service Station	5541	C
141813	Gasoline Service Station	5541	C
142340	Gasoline Service Station	5541	C
160319	Gasoline Service Station	5541	C
137766	Mobile Home Park	6515	C
138617	Mobile Home Park	6515	C
138619	Mobile Home Park	6515	C
139777	Mobile Home Park	6515	C
140674	Mobile Home Park	6515	C
140675	Mobile Home Park	6515	C
140676	Mobile Home Park	6515	C
140809	Mobile Home Park	6515	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
140810	Mobile Home Park	6515	C
141832	Mobile Home Park	6515	C
141833	Mobile Home Park	6515	C
141834	Mobile Home Park	6515	C
141835	Mobile Home Park	6515	C
138610	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
140030	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
140136	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
140728	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
140808	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
140863	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
140868	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
137795	Auto Truck Repair Service	7538	C
138611	Auto Truck Repair Service	7538	C
140831	Auto Truck Repair Service	7538	C
142349	Auto Truck Repair Service	7538	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
160304	Auto Truck Repair Service	7538	C
139126	Car Wash	7542	C
140021	Car Wash	7542	C
137773	Repair Services, Nec	7699	C
138627	Repair Services, Nec	7699	C
139084	Repair Services, Nec	7699	C
139166	Repair Services, Nec	7699	C
139569	Repair Services, Nec	7699	C
140102	Repair Services, Nec	7699	C
140139	Repair Services, Nec	7699	C
140568	Repair Services, Nec	7699	C
140832	Repair Services, Nec	7699	C
140951	Repair Services, Nec	7699	C
140714	Racing, Including Track Operation	7948	C
141769	Golf Course	7992	C

Regulated Confined Animal Feeding Operations Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
2000108	Martin Son Farms	A-KSRL-BA05	B
2000184	Boller, Dennis	A-KSGE-S005	B
2000471	Stahl, Richard	A-KSGE-MA03	B

Regulated Confined Animal Feeding Operations Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
2000811	Fiest, Robert	A-KSGE-S004	B
2001166	North Crest, Inc.	A-KSRL-BA02	B
2001383	Rainbow Jersey Farm	A-KSRL-M002	B
2001655	Roeser, Richard L.	A-KSGE-S007	B
2001836	Pioneer Pork	A-KSGE-S010	B
2002173	Visser, Vinton Karen	A-BBRL-S014	B
2002337	Pioneer Pork (south Facility)	A-KSGE-S011	B
2002606	Visser Farms, Inc.	A-KSRL-H001	B
2000012	Nelson Poultry Farms	A-KSPT-P001	C
2000138	Ksu Modified Early Weaning Swine Unit	A-BBRL-S016	C
2000354	Roesler And Eickholt Farms	A-KSGE-MA01	C
2000468	Goff, Dean	A-KSRL-MA02	C
2000502	Hoch, Willis	A-KSGE-MA04	C
2000520	Barry's Equestrian Center	A-KSPT-EA01	C
2000554	Wandersee Dairy	A-KSGE-MA02	C
2000719	Zeller, John	A-KSRL-MA01	C
2000775	Andy Acres Holstein Farms	A-NEMR-M002	C
2001082	Sinn, Eugene	A-KSRL-S004	C
2001269	Ksu Purebred Beef Facility	A-BBRL-BA02	C
2001390	Sunflower Farms	A-KSRL-SA01	C
2001642	Sinn, Carl	A-KSRL-S005	C
2001659	Eureka Hog Farm	A-KSRL-SA02	C
2001678	Longa Saya Farm	A-KSMR-BA01	C

Regulated Confined Animal Feeding Operations Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
2001998	Monnich Farms	A-KSMR-BA02	C
2002184	Cedar Creek Ranch	A-BBRL-B003	C
2002548	Pioneer Pork	A-KSGE-H001	C
2002572	Manhattan Livestock Comm. Co. Inc.	A-KSRL-BA01	C
2002641	Ksu Cattle Research	A-BBRL-C001	C
2002686	F R Swine, Inc.	A-KSGE-H002	C
2002708	Paulette's Pork Llc (g. Rindt)	A-KSMR-H001	C

Regulated Hazardous Waste Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Leaking Storage Tank Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
3000017	Shop Quik #4	00091	B
3000044	Benny's Short Stop	00241	B
3000124	Chapman Service	01502	B
3000125	Phillips 66 (westside)	01506	B
3000128	Skelly Service, Jerry's	01518	B
3000158	Taylor Petroleum #603	01896	B

Regulated Leaking Storage Tank Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
3000237	Burnett Automotive	02885	B
3000296	Western Auto	03642	B
3000326	Riley Co Shop	03981	B
3000371	Kershaw Concrete	04602	B
3000420	Shop Quik #11	05119	B
3000655	Moo To You, Manhattan	06761	B
3000695	Total #4157	06973	B
3000730	Mini Mart #4	07128	B
3000808	Public Wks Dept	08255	B
3000913	Blueville Nursery	09150	B
3000984	Carson Home Sales Inc	12561	B
3001008	Atwood Rentals	13230	B
3001055	Goetsch Irvine Chrysler	14919	B
3001104	Ks Farm Bureau	16469	B
3001173	Rexs Tire	19246	B
3001175	Riverside Standard	19365	B
3001185	Stein Lease Rental	19784	B
3001204	Steves Auto	20363	B
3001243	Westside Standard	22713	B
3001256	Texaco, Steve's	23085	B
3001261	Vic's 66	23141	B
3001329	Ft Riley, Funston Site#7	23650	B
3001330	Gray's Westloop Serv	23651	B

Regulated Leaking Storage Tank Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
3001331	Manhattan Honda–toyota	23653	B
3001378	Reliable Transfer Storage	24536	B
3001455	Mobile Traveler Industrial Park	25416	B
3001466	Mayflower Moving Co	25453	B
3001498	Western Resources	25612	B
3001609	Restore (campbell Distrib)	26130	B
3001628	Elkins Motor Co Inc.	26204	B
3001710	Continental Baking	26605	B
3001778	Coleman American Moving	26863	B
3001912	Ft Riley, Camp Funston,	27453	B
3001932	Milford Lake	27525	B
3001937	Firestone Store	27549	B
3001958	Ady's Appliances (former Sears Roebuck)	27618	B
3001996	K–b Inc	27944	B
3002024	Jon Murdock Chev	28152	B
3002093	Quik Lube	28544	B
3002203	Military Sales Co	29093	B
3002344	Dara's Fastlane #5	29746	B
3002355	Nat'l Guard, Mates Facility	29789	B
3002407	Tri Lakes Distributing	40439	B
3002408	Freeman Field	40505	B
3002565	Deines, Alvin	80373	B
3002646	Ft Riley, Camp Funston, Hq 89th Arcom	81169	B

Regulated Leaking Storage Tank Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
3002686	Brickei Construction	81279	B
3002690	Small Engine Repair	81287	B
3002772	Kdot, Manhattan	81466	B
3002780	Schurle Signs Inc	81486	B
3002803	Crubel, Don	81562	B
3002817	More Sand Co Inc	81601	B
3002832	Luplow/wahl Properties	81649	B
3000024	Mini Mart #5	00108	C
3000123	Conoco, De Dee's	01498	C
3000126	Coastal Mart #9131 (now Short Stop)	01507	C
3000127	Jerry's 66 Service	01510	C
3000370	Refuse Control	04557	C
3000482	Usd 378, Riley Co High School	05950	C
3000484	Usd 383, Manhattan	05955	C
3000512	Geary Community Hosp	06166	C
3000520	Mercy Hospital	06208	C
3000538	Mercy Health	06282	C
3000580	Total #2174 (vickers)	06429	C
3000612	Pepsi Cola	06558	C
3000703	Town Country #49	06984	C
3000729	Mini Mart #1	07127	C
3000732	Westwood Kwik Sak	07146	C
3000736	Quality Petroleum	07152	C

Regulated Leaking Storage Tank Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
3000778	Us Army Corp, Tuttle Creek	07778	C
3000836	Tuttle Creek State Park	08698	C
3000903	Manhattan Municipal Airport	09077	C
3000914	Nrg Lubricants	09155	C
3000992	Clays Auto Service	12836	C
3001044	Fritz Oil	14537	C
3001172	Rickels 3.2 (rexs Tire)	19242	C
3001225	Town Pump	20955	C
3001263	Amoco, University #8819	23180	C
3001270	Palmer Industries	23210	C
3001343	Pyrodex Production	24023	C
3001367	Ksu, Experiment Station	24195	C
3001395	Manhattan Transit	25044	C
3001608	Campbell Distributing Co	26129	C
3001622	BbDistributing Inc, Manhattan, 5106 Mu	26178	C
3001649	Kwik Sack #3	26293	C
3001725	Kdot, Bldg 1-5022	26649	C
3001817	Ups, Manhattan	27050	C
3001867	Milford Fish Hatchery	27261	C
3001911	National Guard, Oms 11	27451	C
3001924	Goodyear Tire Co	27500	C
3001931	Faa, Mhk Rcag	27519	C

Regulated Leaking Storage Tank Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
3002205	Rolling Meadows Golf Course	29105	C
3002284	Riley Co Police Dept	29481	C
3002423	Sam's Food Mart	42027	C
3002429	Griffith Oil	42476	C
3002445	Enoch Oil Co	42947	C
3002566	Skelly Service, Phil's	80374	C
3002694	Herington Airport, (former)	81293	C
3002850	Kurtenbach Farm	81698	C

Regulated Identified Contaminated Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
7000737	MAIN POST LANDFILL (FORMER)	C503100192	B
7000739	FT RILEY – SOUTHWEST FUNSTON LANDFILL	C503103034	B
7000740	FT RILEY – DRY CLEANING FACILITIES	C503103035	B
7000741	FT RILEY – PESTICIDE STORAGE/MIXING FACILITY	C503103036	B
7000743	FT RILEY – FIRE TRAINING AREA (FORMER)	C503103038	B
7000744	FT RILEY – EAST SEDIMENTATION POND (CUSTER HILL WA	C503103039	B
7000745	FT RILEY – OPEN BURN/OPEN DETONATION AREAS	C503103040	B

Regulated Identified Contaminated Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
7000746	FT RILEY – LIVESTOCK DIPPING FACILITY (FORMER)	C503103041	B
7000747	FMGP – JUNCTION CITY	C503170020	B
7000749	FT RILEY – BLDGS 1301 1605	C503170131	B
7000750	FT RILEY – IMPACT ZONE	C503170132	B
7000751	CAMP FORSYTH FORMER LANDFILL #1	C503171146	B
7000752	CAMP FORSYTH FORMER LANDFILL #2	C503171147	B
7000753	CAMP FORSYTH FORMER LANDFILL #3	C503171148	B
7000755	CAMP FORSYTH FORMER LANDFILL #5	C503171150	B
7000757	CONSTRUCTION DEBRIS LANDFILL	C503171158	B
7000758	CAMP WHITSIDE INCINERATOR (FORMER)	C503171159	B
7000759	CAMP WHITSIDE LANDFILL (FORMER)	C503171160	B
7000760	CAMP WHITSIDE SUBSTATION (FORMER)	C503171161	B
7000762	BUILDING 319 (FORMER BUILDING 749)	C503171169	B
7000763	KPL LANDING SUBSTATION (FORMER)	C503171170	B
7000764	MULLINS PARK (FORMER)	C503171171	B
7000765	PRINT AND PUBLICATION SHOP	C503171172	B
7000766	BUILDING 727 FORMER SERVICE PIT	C503171173	B
7000822	RILEY COUNTY LANDFILL	C508100033	B
7000823	RILEY COUNTY ASPHALT PLANT	C508100034	B
7000824	OGDEN PWS WELLS #2, #7, #8	C508100330	B
7000825	ANTI-PEST	C508100430	B
7000826	FAIRLANE SALVAGE	C508103009	B

Regulated Identified Contaminated Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
7000828	FMGP – MANHATTAN	C508170030	B
7000829	RILEY COUNTY SHOP	C508170194	B
7000830	FERRELLGAS – MANHATTAN	C508170995	B
7000738	PLAZA SPEEDWAY, INC.	C503103022	C
7000748	FT RILEY – BLDG 354 AREA SOLVENT DETECTIONS	C503170130	C
7000754	CAMP FORSYTH FORMER LANDFILL #4	C503171149	C
7000756	CAMP FORSYTH SUBSTATION (FORMER)	C503171151	C
7000761	WARE ELEMENTARY SCHOOL	C503171168	C
7000803	LATIMER GROUNDWATER CONTAMINATION SITE	C506470590	C
7000810	MANHATTAN PWS WELLS #14 #15	C507503042	C
7000811	MANHATTAN PWS PESTICIDES	C507570795	C
7000821	KSU BURIAL PLOT	C508100027	C
7000827	KSU DDT SITE	C508103058	C
7000831	RILEY SATELLITE POW CAMP (FORMER)	C508171261	C
7000832	CAMP/FORT FUNSTON (FORMER)	C508171316	C
7000833	BAYER CONSTRUCTION	C508171328	C

Regulated Solid Waste Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
5000176	Riley County	0185-S	B

Regulated Solid Waste Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
5000283	Pinkerton Motors, Inc.	0273-S	B
5000318	City of Riley	0309-S	B
5000373	Ft. Riley Dept. of Army	0366-S	B
5000374	Ft. Riley Dept. of Army	0367-S	B
5000377	Ft. Riley Dept. of Army	0370-S	B
5000598	Riley County Public Works	0585-S	B
5000607	Bayer Construction Co., Inc.	0594-S	B
5000704	Berwind Railway Service Co.	0683-S	B
5000753	City of Ogden	0732-S	B
5000020	Kansas State University Department of Agronomy	-R	C
5000195	City of Wamego	0201-S	C
5000394	Ft. Riley Dept. of Army	0385-S	C
5000511	Bayer Construction Co., Inc.	0495-S	C
5000663	Bayer Construction Co., Inc.	0651-S	C
5000700	Fort Riley HHW	0679-S	C
5000701	Fort Riley	0680-S	C
5000711	Ft. Riley Pol Landfarm	0690-S	C
5000779	John M. Zeller/Charles M. Zeller	0754-S	C
5000815	US Army, Div. of Envr. Safety	0787-S	C

Regulated Waste Water Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
6000025	NORTHCREST TRAILER COURT #3	C-KS38-NT03	B

Regulated Waste Water Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
6000027	FAIRMONT MOBILE HOME PARK	C-KS38-NT07	B
6000115	BRIGGS JEEP-EAGLE-ISUZU – EAST	I-KS38-PO06	B
6000131	HAMM – #28 CLARK QUARRY	I-KS80-PO01	B
6000518	FT. RILEY (DEPT OF ARMY)	F-KS97-PO01	B
6000519	FT. RILEY (DEPT OF ARMY)	F-KS97-PO01	B
6000523	FT. RILEY (DEPT OF ARMY)	F-KS97-PO01	B
6000524	FT. RILEY (DEPT OF ARMY)	F-KS97-PO01	B
6000657	HAMM – LATIMER #12	I-KS30-PO01	B
6000693	KDHE/BER (ALVIN DEINE'S SITE)	I-KS62-PO01	B
6000746	MARTIN MARIETTA– (JCT CITY/FT RILEY)	I-LR15-PO01	B
6001247	MANHATTAN MWTP	M-KS38-OO01	B
6001299	RILEY	M-KS62-OO01	B
6001422	JUNCTION CITY MWTP	M-LR15-OO01	B
6001427	JUNCTION CITY MWTP	M-LR15-OO01	B
6001428	JUNCTION CITY MWTP	M-LR15-OO01	B
6001429	JUNCTION CITY MWTP	M-LR15-OO01	B
6001430	JUNCTION CITY MWTP	M-LR15-OO01	B
6000016	GREEN VALLEY TRAILER COURT	C-BB25-OO03	C
6000023	RILEY MOBILE HOME PARK	C-KS35-NO01	C
6000026	TUTTLE CREEK TRAILER COURT	C-KS38-NT04	C
6000116	BRIGGS JEEP-EAGLE-ISUZU – WEST	I-KS38-PO07	C
6000240	TIMBER CREEK EAST BENEFIT DISTRICT	M-KS38-DO01	C
6000241	TATARRAX, INC.	M-KS38-OO03	C

Regulated Waste Water Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
6000253	BLUE TOWNSHIP	M-KS75-OO02	C
6000363	LAKESIDE ASSOCIATION	C-BB25-NO02	C
6000383	NORTHCREST INC	C-KS38-NT01	C
6000384	TUTTLE TERRACE TRAILER COURT	C-KS38-NT05	C
6000385	ROCKY FORD TRAILER COURT	C-KS38-OO03	C
6000520	FT. RILEY (DEPT OF ARMY)	F-KS97-PO01	C
6000521	FT. RILEY (DEPT OF ARMY)	F-KS97-PO01	C
6000522	FT. RILEY (DEPT OF ARMY)	F-KS97-PO01	C
6000525	FT. RILEY (DEPT OF ARMY)	F-KS97-PO01	C
6000674	MCCALL PATTERN COMPANY	I-KS38-CO01	C
6000675	KANSAS STATE UNIVERSITY POWER PLANT	I-KS38-CO02	C
6000747	KDWP (MILFORD FISH HATCHERY)	I-LR15-PO02	C
6000892	HODGDON POWDER COMPANY, INC.	I-SH17-NP01	C
6000893	HERINGTON REGIONAL AIRPORT	I-SH17-NP02	C
6001158	TATARRAX HILLS SUBDIVISION – RILEY CO.	M-BB25-OO01	C
6001159	TATARRAX HILLS SUBDIVISION – RILEY CO.	M-BB25-OO01	C
6001241	LEONARDVILLE WWTF	M-KS35-OO01	C
6001244	KDWP – TUTTLE CR(RIVER POND)	M-KS38-NO01	C
6001246	MANHATTAN MWTP	M-KS38-OO01	C
6001248	MANHATTAN MWTP	M-KS38-OO01	C
6001249	TERRA HEIGHTS MWTF	M-KS38-OO04	C
6001250	BLUE TOWNSHIP SEWER DISTRICT	M-KS38-OO05	C
6001267	OGDEN	M-KS51-NO01	C

Regulated Waste Water Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
6001298	USD #378 RILEY COUNTY HIGH SCHOOL	M-KS62-NO02	C
6001431	JUNCTION CITY MWTP	M-LR15-OO01	C
6001769	KDOT. GEARY CO. REST AREA I-70 EAST	M-SH45-NO02	C
6001770	KDOT. GEARY CO. REST AREA I-70 EAST	M-SH45-NO02	C
6002008	PARKER HANNIFIN CORPORATION	P-KS38-OO01	C

Public Water Supply: **MANHATTAN, CITY OF**
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Added Sources:

The Added Sources section lists all the sites that have been added as potential sources of contamination by an evaluator through the assessment process to supplement the original data.

The potential sources listed in this section are sorted to show the added potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business was added as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

Added Sources

Public Water Supply: **MANHATTAN, CITY OF**
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Added Potential Site Sources

Source No.	Source Name	SIC ID	Zone
9000098	Water Hazard	0	B
9001483	waste lagoons	0	B
9000836	farmstead	10008	B
9000838	abandoned farmstead	10008	B
9000842	farmstead	10008	B
9000387	Irrigation equipment, pump site, and well	10012	B
9000032	aboveground fuel storage tanks	10026	B
9000389	Fuel, grain and feed and hay storage	10026	B
9000835	above ground airplane fuel tank	10026	B
9001469	Fuel, grain and feed and hay storage	10026	B
9000034		10067	B
9000099	rural residence	10067	B
9000152	golf course	10067	B
9000590	Septic System for Jack Jill Daycare	10067	B
9000840	septic system	10067	B
9000841	septic system	10067	B
9000033		10075	B
9001330	discharging lagoons	10075	B
9001484	lagoons	10075	B
9000388	pastureland w ith stock cattle	10080	B

Added Potential Site Sources

Source No.	Source Name	SIC ID	Zone
9001250	pastureland	10080	B
9000839	crops	10085	B
9000722	Firing Ranges	10087	B
9000727	range land	10087	B
9001468	pastureland	10087	B
9000591	Irrigated cornfield	115	B
9001251	cropland	115	B
9001470	cropland	115	B
9001131	cropland	116	B
9000837	small cattle feeding operation	2048	B
9000724	print and publications shop	2893	B
9001058	grain storage and ag. services	4221	B
9000151	unknown	5541	B
9000674	underground storage tanks	5541	B
9000723	dry cleaning services	7216	B
9000725	former service pit –Building 727	7538	B
9000834	Rock Cutting Company	0	C
9000844	farmstead	10008	C
9000726	Former Fire Training Area/ 892	10087	C
9000097		1521	C

Added Potential Site Sources

Source No.	Source Name	SIC ID	Zone
9000843	cattle feedlot	2048	C

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Potential Contaminants Summary:

The Contaminants Summary shows the number of identified unregulated sources in the assessment area for each contaminant of concern category.

In order to obtain the number of sources for each category, a relationship was correlated between each Standard Industrial Classification (SIC) and the contaminant of concern categories. Each SIC was assessed and associated with contaminant categories. For example, if not managed properly, a car wash (SIC 7542) could potentially contaminate an intake because of inorganic compounds (IOC) and volatile organic compounds (VOC); thus, a car wash is associated with IOCs and VOCs.

A chart displays a count for each contaminant category. The sum for each category represents the total number of identified sources that have been associated with that particular contaminant category. However, the total number of identified sources does not include contaminants from the Added Sources. In our example, a car wash would be considered 2 sources of contamination. It would be a potential source of contamination for IOCs and for VOCs; thus, 1 would be added to the total number of sources in the VOC category and 1 would be added to the IOC category.

Potential Contaminants Summary

Public Water Supply: MANHATTAN, CITY OF
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Number of Unregulated Site Sources Identified for each Contaminant Category

MicroBiological	Sedimentation	Pesticides	IOC's	SOC's	VOC's	E – P
94	100	11	174	63	118	91

A – Microbiological

B2 – Sedimentation

C* – Pesticides

B – Inorganic Compounds

C – Synthetic Organic Compounds

D – Volatile Organic Compounds

B1 – Eutrophication – Phosphorous

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Potential Contaminants Listing:

The Potential Contaminants section lists the contaminant of concern category associated with each Standard Industrial Classification (SIC) found in an assessment area. A complete list of contaminant category codes are located at the bottom of this page.

The relationships defined between the Standard Industrial Classifications (SIC) and the contaminant of concern categories are displayed in a table format. Using our car wash example, the relationships can be better illustrated. A car wash could release IOC and VOC chemical substances. The connection is shown by indicating the SIC, 7542, and the associated contaminant categories, IOC (Category B) and VOC (Category D). However, the contaminants listed are not associated with any Added Sources.

The list is sorted by the SIC source description and it only shows unique SIC sources. For example, an assessment area can have 20 car washes in an assessment area, but the list is only going to show contaminant categories associated with car washes onetime. This is because all car washes have the same SIC and every car wash poses the same potential threat to water intakes.

A – Microbiological **B** – Inorganic Compounds **B1** – Eutrophication – Phosphorous
B2 – Sedimentation **B*** – Nitrates **C** – Synthetic Organic Compounds
C* – Pesticides **D** – Volatile Organic Compounds

Potential Contaminants Listing

Public Water Supply: MANHATTAN, CITY OF
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Unregulated Identified Site Sources and associated Potential Contaminant Category

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
3728	Aircraft Equipment Manufacturing	inorganics, VOCs	B
"	"	"	D
2951	Asphalt Paving Mixtures And Blocks Manufacturing	inorganics, VOCs	B
"	"	"	D
7538	Auto Truck Repair Service	Inorganics, VOCs	B
"	"	"	D
3732	Boat Building and Repairing Shop Manufacturing	inorganics, VOCs	B
"	"	"	D
2086	Bottled and Canned Soft Drinks Production	BOD	A
7542	Car Wash	Inorganics, VOCs	B
"	"	"	B1
"	"	"	B2
"	"	"	D
5082	Construction and Mining Machinery	NA	NA
7216	Dry Cleaner	Nitrates, phosphorous, VOCs	B
"	"	"	D
5541	Gasoline Service Station	Inorganics, VOCs	B

Unregulated Identified Site Sources and associated Potential Contaminant Category.

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
5541	Gasoline Service Station	Inorganics, VOCs	D
7992	Golf Course	Fertilizers and pesticides	A
"	"	"	B1
"	"	"	B2
"	"	"	B*
"	"	"	C*
1611	Highway and Street Construction	Sedimentation	B2
4212	Local Trucking, without Storage	VOCs	D
3599	Machinery, Except Electrical Manufacturing	inorganics, VOCs	B
"	"	"	D
2011	Meat Packing Plant Manufacturing	BOD, pathogens, Oil and grease	A
"	"	"	B*
3479	Metal Coating and Allied Services Manufacturing	inorganics, VOCs	B
"	"	"	D
3442	Metal Doors, Sash, and Trim Manufacturing	inorganics	B
"	"	"	D
2451	Mobile Home Manufacturing	TSS, VOCs	B
"	"	"	D
6515	Mobile Home Park	Sanitary wastes, Fertilizers	A

Unregulated Identified Site Sources and associated Potential Contaminant Category.

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
6515	Mobile Home Park	Sanitary wastes, Fertilizers	B
"	"	"	B1
"	"	"	B*
1542	Nonresidential Construction	Sedimentation	B2
1389	Oil and Gas Field services	Oil, Salt Water	B
"	"	"	C
7384	Photofinishing Laboratory	NA	B
"	"	"	D
3471	Plating and Polishing Manufacturing	Inorganics, metals, VOCs and metal etch	B
"	"	"	D
2452	Prefabricated Wood Buildings Manufacturing	TSS	B
"	"	"	D
1429	Rock Quarry	Sedimentation	B2
3052	Rubber and plastics hose and belting Manufacturing	Inorganics, metals, VOCs	B
"	"	"	D
5093	Scrap and Waste Materials	Metals, TSS	B
3993	Signs and Advertising Display Manufacturing	inorganics, VOCs	B
"	"	"	D
1521	Single-family Housing Construction	Oil, Paint, Pesticides, Fertilizers	A

Unregulated Identified Site Sources and associated Potential Contaminant Category.

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
1521	Single-family Housing Construction	Oil, Paint, Pesticides, Fertilizers	B1
"	"	"	B2
"	"	"	B*
"	"	"	C
2439	Structural Wood members Manufacturing	TSS, VOCs	B
"	"	"	D
7532	Top, Body, and Upholstery Repair Shops and Paint Shops	Inorganics, VOCs	B
"	"	"	D
3799	Transportation Equipment Manufacturing	inorganics, VOCs	B
"	"	"	D
742	Veterinary Services, Specialties	Sanitary, Inorganics TSS	A
"	"	"	B
752	Animal Specialty Services	Sanitary, fertilizers	A
"	"	"	B
"	"	"	B1
"	"	"	B2
"	"	"	B*
2759	Commercial Printing NEC	Inorganics, VOCs, Semi volatiles	B
"	"	"	C

Unregulated Identified Site Sources and associated Potential Contaminant Category.

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
2759	Commercial Printing NEC	Inorganics, VOCs, Semi volatiles	D
2752	Commercial Printing–Lithographic	Inorganics, VOCs, Semi volatiles	B
"	"	"	C
"	"	"	D
241	Dairy Farms	Sanitary, fertilizers	A
"	"	"	B
"	"	"	B1
"	"	"	B2
"	"	"	B*
4221	Farm Product Warehousing and Storage	TSS, VOCs	B
"	"	"	D
191	General Farm, Primarily Crop	fertilizers, Pesticides	B
"	"	"	B1
"	"	"	B2
"	"	"	B*
"	"	"	C*
2711	Newspapers Publishing and Printing	Inorganics, VOCs, Semi volatiles	B
"	"	"	C
"	"	"	D

Unregulated Identified Site Sources and associated Potential Contaminant Category.

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
7948	Racing, Including Track Operation		NA
4953	Refuse Systems	ALL	A
"	"	"	B
"	"	"	B1
"	"	"	B2
"	"	"	B*
"	"	"	C
"	"	"	C*
"	"	"	D
7699	Repair Services, Nec	inorganics	B

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Protection Measures:

The Protection Measures section shows water quality protection measures for the Standard Industrial Classifications (SIC) identified in the assessment area.

Previous sections of this report are designed to show areas that Public Water Supplies (PWS) can focus on to improve the susceptibility of an assessment area. This section helps identify water quality protection measures that a PWS can use as guidance for implementing action for a potential contaminant site in the assessment area. It focuses on protection measures that can reduce the risk of contamination to the water supply.

This portion of the report only displays water quality protection measures for each type of SIC found in the assessment area. It does not display protection measures for each site in the assessment area because every SIC should have the same or similar water quality protection management practices. However, the protection measures listed are not associated with any Added Sources.

Protection Measures

Public Water Supply: **MANHATTAN, CITY OF**
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Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
3728	Aircraft Equipment Manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	40 CFR 464 and State or federal Storm water pollution prevention regulations
2951	Asphalt Paving Mixtures And Blocks Manufacturing	inorganics, VOCs	Collect and pre-treat wastewater. Control storm water runoff. Minimize ground contamination with petroleum or other products. Control storm water runoff to minimize TSS transport	40 CFR 443 and State or federal Storm water pollution prevention regulations
7538	Auto Truck Repair Service	Inorganics, VOCs	Discharge to POTW. Manage oil products and used oil so that it is not in contact with water	40 CFR 442 and
3732	Boat Building and Repairing Shop Manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct. Recycle where possible. Manage chemicals carefully	State or federal Storm water pollution prevention regulations
2086	Bottled and Canned Soft Drinks Production	BOD	Wastewater pretreatment and/or discharge to a POTW.	40 CFR 407 and State or federal Storm water pollution prevention regulations
7542	Car Wash	Inorganics, VOCs	Install and maintain sediment and grease traps where appropriate	40 CFR 442

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
5082	Construction and Mining Machinery	NA	Discharge to POTW	NA
7216	Dry Cleaner	Nitrates, phosphorous, VOCs	Discharge to POTW. Recycle chemicals	NA
5541	Gasoline Service Station	Inorganics, VOCs	Maintain area to minimize fuel contamination	NA
7992	Golf Course	Fertilizers and pesticides	Proper application of fertilizers and pesticides. Proper cleaning of equipment and disposal of chemicals.	KDHE, KAR 28-16
1611	Highway and Street Construction	Sedimentation	Erosion and Sediment Control	KAR 28-16, KDHE
4212	Local Trucking, without Storage	VOCs	Discharge to a POTW	State or federal Storm water pollution prevention regulations

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
3599	Machinery, Except Electrical Manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	State or federal Storm water pollution prevention regulations
2011	Meat Packing Plant Manufacturing	BOD, pathogens, Oil and grease	Wastewater pretreatment and/or discharge to a POTW	40CFR 432 and State or federal Storm water pollution prevention regulations
3479	Metal Coating and Allied Services Manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	40 CFR 433 and State or federal Storm water pollution prevention regulations
3442	Metal Doors, Sash, and Trim Manufacturing	inorganics	Minimize outdoor storage and control storm water runoff. Pre-treat process wastewater prior to discharge to POTW	State or federal Storm water pollution prevention regulations
2451	Mobile Home Manufacturing	TSS, VOCs	Discharge of process waters to POTW. Minimize outdoor storage.	State or federal Storm water pollution prevention regulations
6515	Mobile Home Park	Sanitary wastes, Fertilizers	Discharge to POTW. Minimize use of lawn chemicals	KAR 28-5

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
1542	Nonresidential Construction	Sedimentation	Erosion and Sediment Control	KAR 28–16, KDHE
1389	Oil and Gas Field services	Oil, Salt Water	Proper management of production wastes	KAR 28–41, 45, 40 CFR 435
7384	Photofinishing Laboratory	NA	Discharge to POTW. Recycle chemicals	CFR 40 459
3471	Plating and Polishing Manufacturing	Inorganics, metals, VOCs and metal etch	Minimize outdoor storage and control storm water runoff. Pre-treat process wastewater prior to discharge to POTW	40 CFR 413 and State or federal Storm water pollution prevention regulations
2452	Prefabricated Wood Buildings Manufacturing	TSS	Discharge of process waters to POTW. Minimize outdoor storage.	State or federal Storm water pollution prevention regulations
1429	Rock Quarry	Sedimentation	Erosion and Sediment Control	KAR 28–16

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
3052	Rubber and plastics hose and belting Manufacturing	Inorganics, metals, VOCs	Pre-treat wastewater prior to discharge. Minimize outdoor storage and control storm water runoff.	40 CFR 428 and State or federal Storm water pollution prevention regulations
5093	Scrap and Waste Materials	Metals, TSS	Minimize contact with storm water	State or federal Storm water pollution prevention regulations
3993	Signs and Advertising Display Manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	40 CFR 459 and State or federal Storm water pollution prevention regulations
1521	Single-family Housing Construction	Oil, Paint, Pesticides, Fertilizers	Proper cleaning and disposal of household hazardous waste. Proper storage, application, and clean up of pesticides and fertilizers	KAR 28-48, KDHE, KDEM
2439	Structural Wood members Manufacturing	TSS, VOCs	Discharge of process waters to POTW. Minimize outdoor storage.	State or federal Storm water pollution prevention regulations
7532	Top, Body, and Upholstery Repair Shops and Paint Shops	Inorganics, VOCs	Discharge to POTW. Recycle where appropriate. Properly maintain oil product and waste. Manage paint and solvent wastes properly	NA

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
3799	Transportation Equipment Manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	40 CFR 464 and State or federal Storm water pollution prevention regulations
742	Veterinary Services, Specialties	Sanitary, Inorganics TSS	Discharge to POT	NA
752	Animal Specialty Services	Sanitary, fertilizers	Collect and treat wastes.	NA
2759	Commercial Printing NEC	Inorganics, VOCs, Semi volatiles	Recycle chemicals where possible. Discharge to POTW	40 CFR 459 and State or federal Storm water pollution prevention regulations
2752	Commercial Printing—Lithographic	Inorganics, VOCs, Semi volatiles	Recycle chemicals where possible. Discharge to POTW	40 CFR 459 and State or federal Storm water pollution prevention regulations
241	Dairy Farms	Sanitary, fertilizers	Collect and treat process wastes. Use good erosion control practices. Minimize storm water contact with contaminants.	40 CFR 405

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
4221	Farm Product Warehousing and Storage	TSS, VOCs	Keep the area clean of grain. Use grease traps.	State or federal Storm water pollution prevention regulations
191	General Farm, Primarily Crop	fertilizers, Pesticides	Maintain good erosion control practices and minimize the use of chemicals	NA
2711	Newspapers Publishing and Printing	Inorganics, VOCs, Semi volatiles	Recycle chemicals where possible. Discharge to POTW	40 CFR 459 and State or federal Storm water pollution prevention regulations
7948	Racing, Including Track Operation	NA	Discharge to POTW. Minimize use of lawn chemicals. Use good erosion control practices	NA
4953	Refuse Systems	ALL	Store wastes properly in order to minimize contact with storm water.	Maintain the lagoon or storage vessel properly. Control storm water run on and runoff to minimize contamination of storm water
7699	Repair Services, Nec	inorganics	Discharge to POTW	NA

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Assessment Analysis:

The Assessment Analysis section displays the numbers assigned to each contaminant of concern category for each question in the susceptibility analysis.

This analysis is based on a decision tree framework consisting of a series of yes/no questions. These questions consider the proximity of contaminant sources to the water supply intake, the type of contaminant, and the application of pollution prevention or water quality protection practices to sources of contamination. As the evaluator moves through the analytical framework, susceptibility points are accumulated based on the presence of contaminant sources in the assessment area.

After all the questions have been answered, the SLS is calculated for each contaminant of concern category. The SLS is determined by counting the number of contamination risk factors found to occur in the delineated assessment area and applying a multiplier to this number. Because the number of contaminant category risk factors is not equal, the multiplier is used to establish a common scale for the SLS of each contaminant category.

Assessment Analysis

Public Water Supply: **MANHATTAN, CITY OF**
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Surface Water Multiple Wells Analysis

A – Microbiological **B** – Inorganic Compounds

B1 – Eutrophication – Phosphorous

B2 – Sedimentation **C** – Synthetic Organic Compounds

C* – Pesticides **D** – Volatile Organic Compounds

No.	Question	Response	A	B	B1	B2	C	C*	D
1	Is any intake located at a treatment plant?	No	1	1	0	0	1	1	1
2	Is there an open channel conveyance from any of the intakes to a treatment plant?	No	0	0	0	0	0	0	0
3	Does a PWS own or control all conveyance right-of-ways?	No	1	1	0	0	1	1	1
4	Does a PWS own or control all areas within 1/4 mile of intake?	No	1	1	0	0	1	1	1
5	Are all areas within 1/4 mile of intakes entirely native grass?	No	1	1	0	0	1	1	1
6	Is transportation infrastructure in close proximity to intake?	Yes	0	1	0	0	1	1	1
7	Are there water quality protection plans in use for each site?	No	0	1	0	0	1	1	1
8	Are any commercial, industrial, or urban areas present?	Yes	1	1	0	0	1	1	1
9	Does each industrial/commercial site and urban area have a water quality protection plan in place?	No	1	1	0	0	1	1	1
10	Is riparian area vegetated?	Yes	0	0	0	0	0	0	0
11	Has riparian area been farmed up to the stream/riverbank?	Yes	0	0	0	0	0	1	0
12	Is there a lack of native grass or trees?	Yes	0	0	0	0	0	0	0
13	Is livestock use present in any of the riparian areas?	No	0	0	0	0	0	0	0
14	Are any confined livestock production sites in riparian area?	No	0	0	0	0	0	0	0
15	Is each confinement area registered with KDHE?	Yes	0	0	0	0	0	0	0
16	Are any row crops (corn, milo, soybeans) present?	Yes	0	0	1	1	0	2	0
17	Are water quality protection plans in use for each cropland?	No	0	0	1	1	0	2	1

No.	Question	Response	A	B	B1	B2	C	C*	D
18	Are any orchards present?	No	0	0	0	0	0	0	0
19	Are water quality protection plans in use for each orchard?	Yes	0	0	0	0	0	0	0
20	Is the intake a river intake?	No	0	0	0	0	0	0	0
21	Is the intake at a city owned lake?	No	1	1	1	1	1	1	1
22	Is there water quality monitoring conducted at all the rivers and/or lakes?	No	1	1	1	1	1	1	1
23	Is TMDL needed for the river or lake?	Yes	1	1	1	1	1	1	1
24	Are TMDL pollutants of concern reported by monitoring?	Yes	0	0	0	0	0	0	0
25	Are any point source discharges within 16 miles upstream of any intake?	Yes	1	1	1	1	1	0	1
26	Is pretreatment required at any point sources?	Yes	1	1	1	1	1	0	1
27	Are all riparian buffers vegetated?	No	1	1	1	1	0	1	0
28	Are vegetated riparian buffers and a water quality protection plan in place?	Yes	0	0	0	0	0	0	0
29	Is there urbanized land within any of the riparian buffers?	Yes	1	1	1	1	1	1	1
30	Is a NPDES stormwater permit required for the urbanized areas?	Yes	0	0	0	0	0	0	0
31	Are voluntary water quality protection plans in place for each urbanized area?	No	1	1	1	1	1	1	1
32	Is there industrial land use within any of the riparian buffers?	Yes	1	1	1	1	1	1	1
33	Is a NPDES stormwater permit required for the industrial areas?	Yes	0	0	0	0	0	0	0
34	Are voluntary water quality protection plans in place for each industrial area?	No	1	1	1	1	1	1	1
35	Is there any small grain (wheat, oats, barley) production?	Yes	0	0	1	1	0	1	0
36	Are water quality protection plans in use for each grain production?	No	0	0	1	1	0	1	0
37	Are there unsewered developments (concentrations of lagoons or septic systems) present in Zone B?	No	0	0	0	0	0	0	0
38	Is a general watershed water quality protection plan in use?	No	1	1	1	1	1	1	1
39	Are any point source discharges within 16 miles upstream of intake?	Yes	0	0	0	0	0	0	0
40	Is pretreatment required at any of the point sources?	Yes	1	1	1	1	1	0	1

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Site Comments:

The Site Comments section lists all the comments that were added for the potential sources of contamination found in the assessment area.

Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding detail to the sites that can be referenced for more information.

This local information may include comments on potential contamination threats (or lack there of), local water quality protection initiatives, etc. Adding comments are optional and are mainly focused on sources in areas that could have the greatest impact on water supply if a spill or release occurred in the environment. It is left to the discretion of the PWS and/or source water assessment committee to add comments.

Site Comments

Public Water Supply: **MANHATTAN, CITY OF**
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Comments for Unregulated Sites

Potential Contaminant Site No.	Site Comments	Author
137804	Same location as 137808, 137807, 137806, 137805 – occasional retail business now.	Dennis Taggart
137805	Same location as 137808, 137807, 137806, 137804 – occasional retail business now.	Dennis Taggart
137806	Same location as 137808, 137807, 137805, 137804 – occasional retail business now.	Dennis Taggart
137807	Same location as 137808, 137806, 137805, 137804 – occasional retail business now.	Dennis Taggart
137808	Same location as 137807, 137806, 1370805, 1370804 – occasional retail business now	Dennis Taggart
138629	Not meat packing plant – coin operated laundry.	Dennis Taggart
138630	No longer sports/bait shop – used car lot now.	Dennis Taggart
139126	Another comment	Derrick Beasley

Comments for Unregulated Sites

Potential Contaminant Site No.	Site Comments	Author
139126	TEST Comment for 139126	Derrick Beasley

Comments for Regulated Confined Animal Feeding Operations Sites

Potential Contaminant Site Name	Site No.	Site Comments	Author
Boller, Dennis	2000184	This is a swine facility with no groundwater monitoring.	Nicole Fisher
Cedar Creek Ranch	2002184	This cattle livestock facility has no water quality protection plans.	Nicole Fisher
Roeser, Richard L.	2001655	This is a swine facility with no groundwater monitoring.	Nicole Fisher
Sunflower Farms	2001390	This swine facility has no groundwater monitoring.	Nicole Fisher

Comments for Regulated Hazardous Waste Sites

Did Not Receive Any Comments

Comments for Regulated Leaking Storage Tank Sites

Potential Contaminant Site Name	Site No.	Site Comments	Author
Deines, Alvin	3002565	The site is currently being monitored from a 1984 gasoline spill. Two public water wells and two domestic water wells are within .25 miles downgradient of the spill. For information contact Tom Guilfoyle (785) 296-6385	Nicole Fisher

Comments for Regulated Leaking Storage Tank Sites

Potential Contaminant Site Name	Site No.	Site Comments	Author
Freeman Field	3002408	Storage tank removed, above ground tank installed with proper containment.	Dennis Taggart
Fritz Oil	3001044	The site is currently on hold from a gasoline leak in 1989. The leak was not within the impact area of any known wells.	Nicole Fisher
Ft Riley, Camp Funston,	3001912	The site is closed from a leak in 1996. No groundwater contamination was suspected.	Nicole Fisher
Ft Riley, Camp Funston, Hq 89th Arcom	3002646	The site is closed from a heating oil and waste oil spill in 1994. No groundwater contamination was suspected.	Nicole Fisher
Luplow/wahl Properties	3002832	The site is closed from a 1998 gasoline spill. No groundwater contamination was suspected.	Nicole Fisher
Mobile Traveler Industrial Park	3001455	Storage tank removed, ground monitoring procedures completed.	Dennis Taggart
Nat'l Guard, Mates Facility	3002355	The site is on hold until an investigation is performed from a leak in 1997.	Nicole Fisher
Public Wks Dept	3000808	Storage Tanks removed in mid-1990's	Dennis Taggart
Quality Petroleum	3000736	The site is closed from a 1988 leak. No groundwater contamination was suspected.	Nicole Fisher
Rolling Meadows Golf Course	3002205	Tank removed in 1996, above ground tank with proper containment now.	Dennis Taggart
Texaco, Steve's	3001256	Storage Tanks removed, new compliant tanks installed, ground monitoring procedures in place.	Dennis Taggart
Total #4157	3000695	Location shut down, tanks removed several years ago.	Dennis Taggart

Comments for Regulated Identified Contaminated Sites

Potential Contaminant Site Name	Site No.	Site Comments	Author
OGDEN PWS WELLS #2, #7, #8	7000824	The groundwater and public water supply have contained various levels of volatile organic compounds since 1986. For more information contact Bridget Wilson (785) 291-3246	Nicole Fisher

Comments for Regulated Solid Waste Sites

Potential Contaminant Site Name	Site No.	Site Comments	Author
Fort Riley HHW	5000700	Hazardous waste facilities have no groundwater monitoring requirements.	Nicole Fisher
Ft. Riley Dept. of Army	5000374	This facility was only used for 6 months in 1980–1981.	Nicole Fisher
Pinkerton Motors, Inc.	5000283	As per Christine Mennicke of KDHE: This was a construction materials disposal site until 1984, no activity since then.	Dennis Taggart

Comments for Regulated Waste Water Sites

Potential Contaminant Site Name	Site No.	Site Comments	Author
BLUE TOWNSHIP	6000253	only one plant.	Steven DeHart
GREEN VALLEY TRAILER COURT	6000016	out of service	Steven DeHart
JUNCTION CITY MWTP	6001422	Location of wastewater plant discharge point	Dennis Taggart
KDWP – TUTTLE CR(RIVER POND)	6001244	This facility uses non–discharging lagoons.	Nicole Fisher
OGDEN	6001267	This facility is non–discharging lagoons.	Nicole Fisher
RILEY MOBILE HOME PARK	6000023	This facility uses non–discharging lagoons.	Nicole Fisher
TIMBER CREEK EAST BENEFIT DISTRICT	6000240	Plant decommissioned and removed in 1999.	Steven DeHart

Comments for Regulated Waste Water Sites

Potential Contaminant Site Name	Site No.	Site Comments	Author
TUTTLE CREEK TRAILER COURT	6000026	This facility no longer exists; trailer court has been connected to public sewer	Joe Kitterman

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Added Site Comments:

The Added Site Comments section lists the comments for why sites were added as a potential source of contamination found to the assessment area.

Added Site Comments

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Comments for Added Contaminant Sites

Added Contaminant Site Name	Site No.	Site Comments	Author
Firing Ranges	9000722	This information was obtained from the Wellhead Protection plan.	Nicole Fisher
Former Fire Training Area/ 892	9000726	This information was obtained from the Wellhead Protection Plan.	Nicole Fisher
Fuel, grain and feed and hay storage	9000389	This information was obtained from the Wellhead Protection Plan.	Nicole Fisher
Fuel, grain and feed and hay storage	9001469	This site could contaminate the public water supply.	Nicole Fisher
Irrigated cornfield	9000591	irrigated cropground has potential for runoff of chemicals or fertilizers	Mike Houck
Irrigation equipment, pump site, and well	9000387	This information was obtained from the Wellhead Protection Plan.	Nicole Fisher
Rock Cutting Company	9000834	stone cutting facility	David Gurss
Septic System for Jack Jill Daycare	9000590	private onsite wastewater system 60 ft west of well	Mike Houck
Water Hazard	9000098	The city built a pond without liner approx. 30 feet south of well #3. This is well within the 100 foot exclusion area around we	Clifford White
abandoned farmstead	9000838	abandoned farmstead	David Gurss

Comments for Added Contaminant Sites

Added Contaminant Site Name	Site No.	Site Comments	Author
above ground airplane fuel tank	9000835	fuel tank	David Gurss
aboveground fuel storage tanks	9000032	Above ground fuel storage tanks	Mike Houck
cattle feedlot	9000843	cattle feedlot	David Gurss
cropland	9001131	This site could contaminate the public water supply.	Nicole Fisher
cropland	9001251	This site could contaminate the public water supply.	Nicole Fisher
cropland	9001470	This site could contaminate the public water supply.	Nicole Fisher
crops	9000839	2003 spring crop (corn, milo or soybean)	David Gurss
discharging lagoons	9001330	This site could contaminate the public water supply.	Nicole Fisher
dry cleaning services	9000723	This information was obtained from the Wellhead Protection plan.	Nicole Fisher
farmstead	9000836	farmstead	David Gurss
farmstead	9000842	farmstead	David Gurss
farmstead	9000844	farmstead	David Gurss

Comments for Added Contaminant Sites

Added Contaminant Site Name	Site No.	Site Comments	Author
former service pit –Building 727	9000725	This information was obtained from the Wellhead Protection Plan.	Nicole Fisher
golf course	9000152	On–site septic system for clubhouse is about 250 feet from well– soil is sandy	Joe Kitterman
grain storage and ag. services	9001058	This site could contaminate the public water supply.	Nicole Fisher
lagoons	9001484	2 new lagoons at gunpowder factory — type of waste to be discharged is unknown.	Joan Ratzlaff
pastureland	9001250	This site could contaminate the public water supply.	Nicole Fisher
pastureland	9001468	This site could contaminate the public water supply.	Nicole Fisher
pastureland w ith stock cattle	9000388	This information was obtained from the Wellhead Protection Plan.	Nicole Fisher
print and publications shop	9000724	This information was obtained from the Wellhead Protection plan.	Nicole Fisher
range land	9000727	This information was obtained from the Wellhead Protection Plan.	Nicole Fisher
rural residence	9000099	There are several Septic Tanks within this area. It has approx. 50 homes within Zone A and B.	Clifford White
septic system	9000840	septic system	David Gurss
septic system	9000841	septic system	David Gurss

Comments for Added Contaminant Sites

Added Contaminant Site Name	Site No.	Site Comments	Author
small cattle feeding operation	9000837	small cattle feeding operation	David Gurss
underground storage tanks	9000674	There are underground fuel storage tanks and fuel pumps south of well site	Mike Houck
unknown	9000151	This site was previously a service station and may have had leaking storage tanks.	Joe Kitterman
waste lagoons	9001483	2 new waste lagoons at gunpowder factory — type of waste to be discharged is unknown.	Joan Ratzlaff
Unknown	9000033	On-site wastewater lagoon for service station	Mike Houck
Unknown	9000034	On-site wastewater system for Bait Shop	Mike Houck
Unknown	9000097	There are several new homes being constructed at this time in that area.	Clifford White

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Analysis Question Comments:

The Analysis Question Comments section lists all the comments that were added during analysis portion of the assessment, in which a series of yes/no questions were asked.

Evaluators have the option to add comments to questions to clarify why a response was given or to give more details to a question. Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding clarification and details that could not be identified with a simple yes or no response.

Analysis Question Comments

Public Water Supply: MANHATTAN, CITY OF
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Comments for Analysis Questions

Analysis Question	Question Comments	Author
Did Not Receive Any Comments		